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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/966,985 11/10/97 JACOBSEN

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EXAMINER

LM01/0609

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ART UNIT

PAPER NUMBER

2778  
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06/09/99

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
**08/966,985**

Applicant(s)  
**Jacobsen et al.**

Examiner  
**Jeff Piziali**

Group Art Unit  
**2778**



☒ Responsive to communication(s) filed on Nov 10, 1997

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-20 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-20 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 86

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 9-12 and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ooi et al. (5,648,860) in view of Kikinis et al. (5,634,080).

In regards to claim 1, Ooi et al. disclose a reflective display comprising: a matrix display (Column 1, Lines 17-30), a lens [42] (Figure 1; Column 36, Lines 25-32), a light source (Column 36, Line 6), and an optical coupler (Figure 18; Column 42, Lines 20-25). Ooi et al. do not disclose expressly a portable communications device having a wireless receiver. Kikinis et al. do disclose a portable communications device having a wireless receiver (Figure 11; Column 16, Line 62 - Column 17, Line 5). Ooi et al. and Kikinis et al. are analogous art because they are from the field of devices utilizing a liquid crystal display. At the time of invention, it would have been obvious to a person of ordinary skill in the art to use Ooi's reflective display with Kikinis' portable communications device. The motivation for doing so would have been to provide a compact display capable of high brightness. Therefore, it would have been obvious to combine Ooi et al. with Kikinis et al. to obtain the invention as specified in claim 1.

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In regards to claim 2, Ooi et al. disclose an array of pixel elements, transistor circuits formed with single crystal silicon (Column 37, Lines 40-43), and a reflective pixel electrode (Column 36, Lines 62-67).

In regards to claim 9, Ooi et al. do not disclose expressly a wireless pager. Kikinis et al. do disclose a wireless pager (Figure 12; Column 18, Lines 7-20). For the reasons set forth in the rejection of claim 1, it would have been obvious to combine Ooi et al. with Kikinis et al. to obtain the invention as specified in claim 9.

In regards to claim 10, Ooi et al. do not disclose expressly a telephone. Kikinis et al. do disclose a telephone (Figure 11; Column 16, Line 62 - Column 17, Line 5). For the reasons set forth in the rejection of claim 1, it would have been obvious to combine Ooi et al. with Kikinis et al. to obtain the invention as specified in claim 10.

In regards to claim 11, Ooi et al. do not disclose expressly a docking station for a wireless telephone. Kikinis et al. do disclose a docking station for a wireless telephone (Figure 11; Column 16, Line 62 - Column 17, Line 5). For the reasons set forth in the rejection of claim 1, it would have been obvious to combine Ooi et al. with Kikinis et al. to obtain the invention as specified in claim 11.

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In regards to claim 12, Ooi et al. disclose a reflective display comprising: an active matrix liquid crystal display (Column 37, Lines 40-43), an array of pixel elements, transistor circuits formed with single crystal silicon (Column 37, Lines 40-43), a reflective pixel electrode (Column 36, Lines 62-67), a lens [42] (Figure 1; Column 36, Lines 25-32), plural light emitting diodes (Column 20, Line 9), and dichroic prism (Figure 18; Column 42, Lines 20-25). Ooi et al. do not disclose expressly a portable communications device. Kikinis et al. do disclose a portable communications device (Figure 11; Column 16, Line 62 - Column 17, Line 5). For the reasons set forth in the rejection of claim 1, it would have been obvious to combine Ooi et al. with Kikinis et al. to obtain the invention as specified in claim 12.

In regards to claim 14, Ooi et al. disclose an array of at least 320 by 240 pixel electrodes (Column 40, Lines 4-7)

In regards to claim 15, Ooi et al. disclose a diffuser (Column 14, Lines 22-28).

In regards to claim 16, Ooi et al. disclose dichroic mirrors (Column 50, Lines 49-60).

In regards to claim 17, Ooi et al. disclose a camera (Column 17, Lines 56-59).

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In regards to claim 18, Ooi et al. do not disclose expressly a telephone. Kikinis et al. do disclose a telephone (Figure 11; Column 16, Line 62 - Column 17, Line 5). For the reasons set forth in the rejection of claim 1, it would have been obvious to combine Ooi et al. with Kikinis et al. to obtain the invention as specified in claim 18.

In regards to claim 19, Ooi et al. do not disclose expressly a docking station for a telephone. Kikinis et al. do disclose a docking station for a telephone (Figure 11; Column 16, Line 62 - Column 17, Line 5). For the reasons set forth in the rejection of claim 1, it would have been obvious to combine Ooi et al. with Kikinis et al. to obtain the invention as specified in claim 19.

In regards to claim 20, Ooi et al. do not disclose expressly a pager. Kikinis et al. do disclose a pager (Figure 12; Column 18, Lines 7-20). For the reasons set forth in the rejection of claim 1, it would have been obvious to combine Ooi et al. with Kikinis et al. to obtain the invention as specified in claim 20.

3. Claims 3-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ooi et al. (5,648,860) in view of Kikinis et al. (5,634,080) as applied to claims 1-20 above, and further in view of Brody (4,980,774).

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In regards to claim 3, Ooi et al. do not disclose expressly a color sequential display circuit. Brody does disclose a color sequential display circuit (Column 15, Lines 9-12). Ooi et al. and Brody are analogous art because they are from the field of devices utilizing a liquid crystal display. At the time of invention, it would have been obvious to a person of ordinary skill in the art to use Ooi's reflective display with Brody's color sequential display drive method. The motivation for doing so would have been to reduce the number of analog switches and reduce cost. Therefore, it would have been obvious to combine Ooi et al. with Brody to obtain the invention as specified in claim 3.

In regards to claim 4, Ooi et al. do not disclose expressly a switching circuit. Brody does disclose a switching circuit (Column 15, Lines 30-35). For the reasons set forth in the rejection of claim 3, it would have been obvious to combine Ooi et al. with Brody to obtain the invention as specified in claim 4.

In regards to claim 5, Ooi et al. disclose a dichroic prism (Figure 18; Column 42, Lines 20-25).

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In regards to claim 6, Ooi et al. disclose a reflective display comprising: an active matrix liquid crystal display (Column 37, Lines 40-43), a lens [42] (Figure 1; Column 36, Lines 25-32), plural light sources (Column 36, Line 6), and dichroic prism (Figure 18; Column 42, Lines 20-25). Ooi et al. do not disclose expressly a portable communications device having a color sequential display. Kikinis et al. do disclose a portable communications device (Figure 11; Column 16, Line 62 - Column 17, Line 5) and Brody does disclose having a color sequential display (Column 15, Lines 9-12). For the reasons set forth in the rejection of claim 3, it would have been obvious to combine Ooi et al. with Brody to obtain the invention as specified in claim 6.

In regards to claim 7, Ooi et al. disclose a diffuser (Column 14, Lines 22-28).

In regards to claim 8, Ooi et al. disclose dichroic mirrors (Column 50, Lines 49-60).

4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ooi et al. (5,648,860) in view of Brody (4,980,774).

In regards to claim 13, Ooi et al. do not disclose expressly a color sequential display circuit. Brody does disclose a color sequential display circuit (Column 15, Lines 9-12). For the reasons set forth in the rejection of claim 3, it would have been obvious to combine Ooi et al. with Brody to obtain the invention as specified in claim 13.



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*Conclusion*

5. The art made of record and not relied upon is considered pertinent to applicant's disclosure. Johnson et al. (5,822,021), Flasck (5,108,172) and Zavracky et al. (5,673,059) are cited to further show the state of the art with respect to reflective displays.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Piziali whose telephone number is (703) 305-8382. The examiner can normally be reached on Monday - Friday from 6:30 AM to 3 PM E.S.T.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached on (703) 305-4938.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(703) 308-9051, (for formal communications intended for entry)

**Or:**

(703) 308-6606 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal  
Drive, Arlington, VA., Sixth Floor (Receptionist).



**MATTHEW LUU  
PRIMARY EXAMINER**

JP - 6/1/99